

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
 )  
Campbell et al. ) Group Art Unit: 1632 (Prior Appl.)  
 )  
Serial No.: Unknown ) Examiner: D. Crouch (Prior Appl.)  
(Prior Appl. Ser. No. 09/650,285) )  
 )  
Filed: November 21, 2001 )  
 )  
For: UNACTIVATED OOCYTES AS )  
CYTOPLAST RECIPIENTS FOR )  
NUCLEAR TRANSFER )

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

**PRELIMINARY AMENDMENT**

Prior to the examination of the above application, please amend this application  
as follows:

**IN THE CLAIMS:**

Please cancel claims 1-18.

Please add the following new claim:

--19. (New) A method of cloning a non-human mammal by nuclear transfer  
comprising:

(i) inserting a nucleus of a non-human mammalian differentiated somatic cell,  
which has passed start in the mitotic cell cycle and is in the G1 phase of the cell cycle,  
into an unactivated, metaphase II-arrested, non-human mammalian enucleated oocyte  
of the same species to reconstruct an embryo;

- (ii) maintaining the reconstructed embryo without activation for a sufficient time to allow the reconstructed embryo to become capable of developing to term;
- (iii) activating the resultant reconstructed embryo;
- (iv) culturing said activated, reconstructed embryo to blastocyst; and
- (v) transferring said cultured, reconstructed embryo to a host non-human mammal of the same species such that the reconstructed embryo develops to term. --

REMARKS

Claims 1-18 have been canceled. Claim 19 is new and is fully supported by the specification. Upon amendment, claim 19 is pending in this application. Claim 19 corresponds substantially to the claims in U.S. Patent No. 6,215,041, issued April 10, 2001.

Applicants filed Application Ser. No. 09/650,194 on August 29, 2000, having claims that correspond substantially to the claims in U.S. Patent No. 5,945,577, issued August 31, 1999. The claims in the two applications differ in that the claim in the instant application recites that the donor cell has passed start in the mitotic cell cycle and is in the G1 phase of the cell cycle. The claims in Application Ser. No. 09/650,194 recite that the donor cell is in the G1 phase of the cell cycle, but do not recite that the cell has passed start.

As the specification explains, start occurs in the G1 phase of the cell cycle.

The mitotic cell cycle has four distinct phases, G1, S, G2, and M. The beginning event in the cell cycle, called start, takes place in the G1 phase and has a unique function. The decision or commitment to undergo another cell cycle is made at start. Once a cell has passed through start, it passes through the remainder of the G1 phase, which is the pre-DNA synthesis phase.

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(Specification at 7, lines 26-32.) Therefore, cells in the G1 phase of the cell cycle that have passed through start have made the commitment to undergo another cell cycle. Cells in the G1 phase of the cell cycle that have not passed through start have not made this commitment. Consequently, cells in the G1 phase of the cell cycle may have made or not made this commitment depending on whether they have passed through start.

If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
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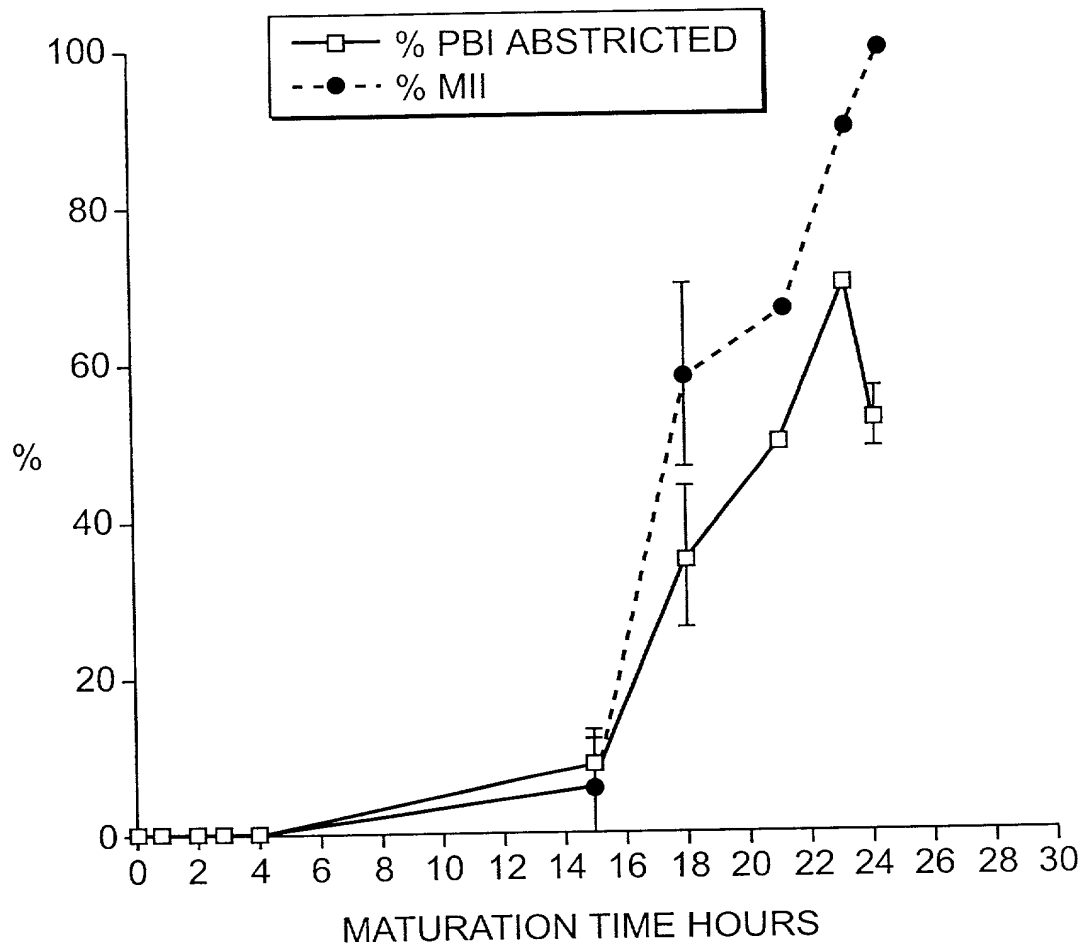
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**FIG. 1**